

10/541168

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/060777 A3

(51) International Patent Classification⁷: B65G 13/06 (74) Agents: DANILUCK, John, V. et al.; Woodard, Emhardt, Moriarty, McNett & Henry LLP, Bank One Center/Tower, Suite 3700, 111 Monument Circle, Indianapolis, IN 46204 (US).

(21) International Application Number: PCT/US2003/041519 (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 30 December 2003 (30.12.2003) (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English (26) Publication Language: English

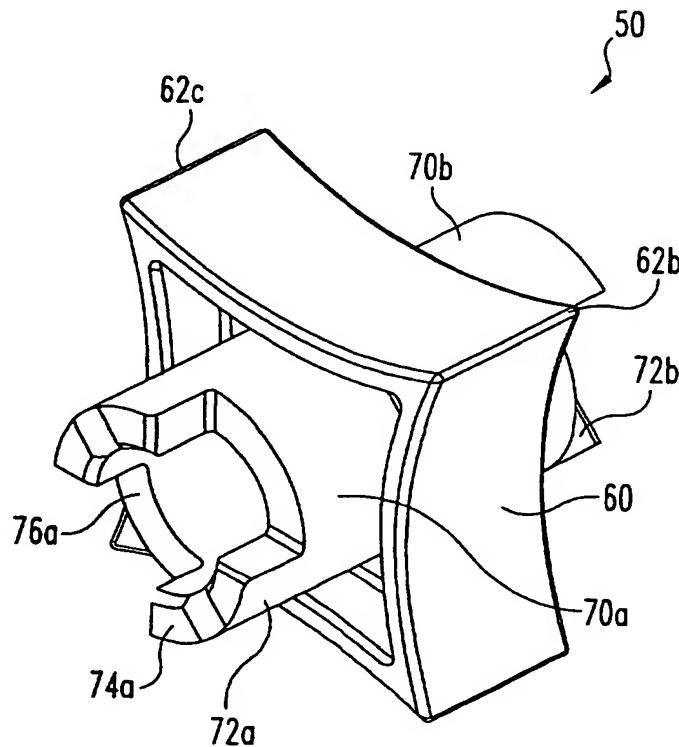
(30) Priority Data: 60/437,526 31 December 2002 (31.12.2002) US

(71) Applicant (for all designated States except US): SHUTTLEWORTH, INC. [US/US]; 10 Commercial Road, Huntington, IN 46750 (US).

(72) Inventor; and (75) Inventor/Applicant (for US only): BRUMM, Christopher, A. [US/US]; 6240 N. 530 W. St., Andrews Drive, Huntington, IN 46750 (US).

[Continued on next page]

(54) Title: COMPRESSION PASSING ROLLER



(57) Abstract: Methods and apparatus for conveying a stack (22) of paper products by the use of rollers (50, 150, 250 or 350) that include lobed outer surfaces for contacting the stack of paper.

WO 2004/060777 A3



Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

21 April 2005

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|---|
| Applicant's or agent's file reference 3161-299SHUT | FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |
| International application No. PCT/US03/41519 | International filing date (day/month/year) 30 December 2003 (30.12.2003) | (Earliest) Priority Date (day/month/year) 31 December 2002 (31.12.2002) |
| Applicant SHUTTLEWORTH, INC. | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (See Box II).

4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:



5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 6



as suggested by the applicant.



None of the figures



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/41519

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

Methods and apparatus for conveying a stack (22) of paper by the use of rollers (50, 150, 250 or 350) that include lobed outer surfaces for contacting the stack of paper.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/41519

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65G 13/06

US CL : 198/781.04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 198/781.04, 692, 779, 781.02, 781.03, 781.08, 781.1, 782

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 1,299,198 A (LOW et al) 01 April 1919 (01.04.1919), see entire document. | 1-39 |
| A | US 3,115,917 A (HERTWIG) 31 December 1963 (31.12.1963), see entire document. | 1-39 |
| A,P | US 6,516,940 B1 (HART et al) 11 February 2003 (11.02.2003), see entire document. | 1-39 |

Further documents are listed in the continuation of Box C.

See patent family annex.

| | | |
|--|---|---|
| * Special categories of cited documents: | | |
| "A" | document defining the general state of the art which is not considered to be of particular relevance | "T" |
| "E" | earlier application or patent published on or after the international filing date | "X" |
| "L" | document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" |
| "O" | document referring to an oral disclosure, use, exhibition or other means | "&" |
| "P" | document published prior to the international filing date but later than the priority date claimed | document member of the same patent family |

Date of the actual completion of the international search

21 April 2004 (21.04.2004)

Date of mailing of the international search report

04 MAR 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Joseph Valenza

Telephone No. 703-308-2577